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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,638	12/19/2003	Eunkyu Jang	HDD03-HM09	9893

7590 12/14/2006

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EXAMINER

CHEN, TIANJIE

ART UNIT PAPER NUMBER

2627

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/750,638

Applicant(s)

JANG ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-18 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

Ex parte Quayle

Election/Restrictions

1. Applicant's election without traverse of claims 13-18 in the reply filed on 11/17/2006 is acknowledged.

Ex parte Quayle

2. This application is in condition for allowance except for the following formal matters:

- In claim 14, line 2; "an electromagnetic interference (EMI) generating" should be changed to --a discharging--.
- In claims 15-18, line 2; "EMI generating" should be changed to --discharging--; respectively.

(Electromagnetic interference is an undesired phenomenon. Examiner sees no reason for an invention to introduce an electromagnetic interference generating circuit into a device, it would only make the performance worse. The actual circuit applied in this invention is a discharging circuit. Corresponding change is also suggested for the specification.)

- In Spec. p. 5, line 10; "reduced" should be changed to --increased--, since reducing signal to noise ratio would make the performance worse.
- In abstract, line 4; "reduced" should also be changed to --increased--.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Allowable Subject Matter

3. Claims 13-18 are allowed.

The following is an examiner's statement of reasons for allowance:

- With regard to independent claim 13, as the closest reference on record, Subrahmanyam (US 7,006,331) discloses a head gimbal assembly (HGA) for a hard disk drive, comprising: a flexure; a head slider mounted on the flexure and including a stainless steel lamina with a front edge, a side, and a rear, and providing for a read pair (R-, R+) and a write pair (W-, W+) of electrical connections; a pair of dabs of non-conductive epoxy generally disposed in the gaps between the front and side, a pair of dabs of conductive epoxy generally disposed in the gaps between the rear and sides, and a read-write head structurally attached to the head slider by the pair of dabs of non-conductive epoxy, and grounded for electrostatic protection by the pair of dabs of conductive epoxy; **but fails to show** a group of dielectric-material ridges disposed on said stainless steel lamina, and set orthogonal to one another along the side, front, and rear edges, all on an underside of the head slider; a pair of dabs of non-conductive epoxy generally disposed in the gaps between the front and side ones of the group of dielectric-material ridges near said front edge, and having an electrical resistance in the range of 3K to 12M ohms; a pair of dabs of conductive epoxy generally disposed in the gaps between the rear and side ones of the group of dielectric-material ridges near said rear edge, and having an electrical resistance of less than fifty ohms, and subject to dielectric breakdown when impressed with 1-5 volts; and a

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read-write head insulatively supported by the group of dielectric-material ridges, and structurally attached to the head slider by the pair of dabs of non-conductive epoxy, and grounded for electrostatic protection by the pair of dabs of conductive epoxy; wherein, such construction reduces the head and the slider's exposure to severe electrostatic discharge (ESD) events and dissipates electrostatic voltage charges on the head.

- Applicant asserts: this invention provides an interconnect that may reduce a head and head slider's exposure to electrostatic discharge (ESD) events and may dissipate electrostatic charging of the head. This invention may provide a improved signal to noise ratio during data read/write operations (Specification, p.3)

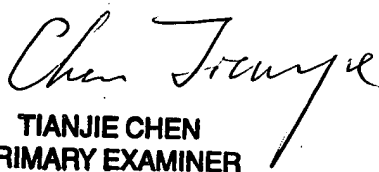
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


TIANJIE CHEN
PRIMARY EXAMINER